

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re application of)
Derossett et al.) Group Art Unit:
) 1725
) Examiner:
Application No.: 10/625,783) M. Alexandra Elve
)
Confirmation No.: 8187)
)
Filed: July 23, 2003)
)
For: METHOD AND APPARATUS FOR LASER)
INSCRIPTION OF AN IMAGE ON A SURFACE)

REPLY BRIEF OF APPELLANT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 2231301459

Sir:

Pursuant to 37 C.F.R. § 41.41 and MPEP § 1208, the following reply brief is submitted, a Notice of Appeal having been filed on June 21, 2006 for the above-identified application on behalf of the inventors, Thomas Derossett, Jr. and Timothy Miller.

I. STATUS OF CLAIMS

The status of the claims is as follows:

Claims rejected: Claims 1-6.

Claims allowed: None.

Claims withdrawn: None.

Claims objected to: None.

Claims canceled: Claim 7.

Identification of claims that are being appealed: Claims 1 – 6.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether the amendment to page 5 of the specification introduces new matter under 35 U.S.C. § 132.

B. Whether claims 1-6 are unpatentable under 35 U.S.C. § 102 as being anticipated by Drouillard et al. (US Patent 5,897,797).

III. ARGUMENT

A. OBJECTION TO AMENDMENT TO SPECIFICATION

The Examiner has objected to the amendment to page 5 of the specification under 35 U.S.C. § 132 as introducing new matter. The proposed amendment is as follows:

The apparatus utilized to carry out the foregoing method comprises an assembly that includes an emitter housing in which the laser emission source is located. A marking head is pivotally affixed directly to the emitter housing and electronically and optically communicates therewith. Beam directing apparatus in the marking head is electronically connected to a controller to receive and process the signals for controlling the beam directing apparatus to move the laser beam over the surface to etch the desired pattern. Preferably, the marking head is provided with one or more suction devices for securing the marking head in proper alignment and spacing with the surface being etched and interlocks are provided to prevent the firing of the laser until the marking head is correctly positioned with respect to the surface to be etched.

Specifically, the Examiner states that “[t]he added material which is not supported by the original disclosure is as follows: ‘marking head is affixed directly to the emitter housing.’” (Office Action mailed Mar. 24, 2006).

In the Appeal Brief, the Applicants pointed out that “The direct attachment is illustrated in FIG. 1 and 2. The cylindrical extension forming the pivot joint is an extension of the side wall of the marking head.”

It is well accepted that drawings may provide the basis for subsequent amendments to the specification without producing prohibitory new matter therein. *In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962).

For convenience, FIG. 1 and FIG. 2 are reproduced below:

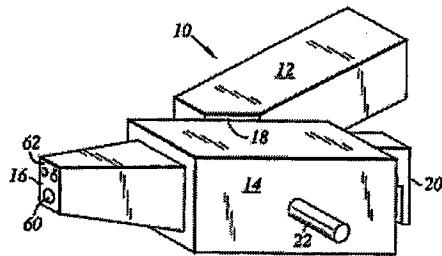


Fig. 1

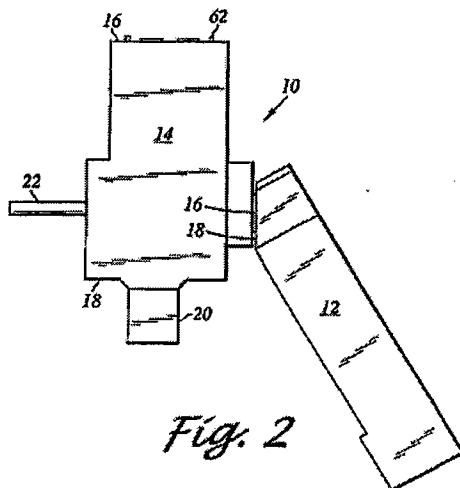


Fig. 2

FIG. 1 and FIG. 2 clearly show that the marking head 14 is pivotally affixed directly to the emitter housing 12, as opposed to prior art devices in which the emitter housing, and consequently the laser source, is remotely located with respect to the marking head and are optically in communication through an elongated light path, such as an articulated arm.

In the Examiner's Answer, the Examiner only states that "[t]here is no basis in applicant's specification for "directly attached." It is respectfully submitted that the Examiner's conclusory statement that there is "no basis in the applicant's specification" is inaccurate and is non-responsive to the Applicants' arguments presented in the Appeal Brief.

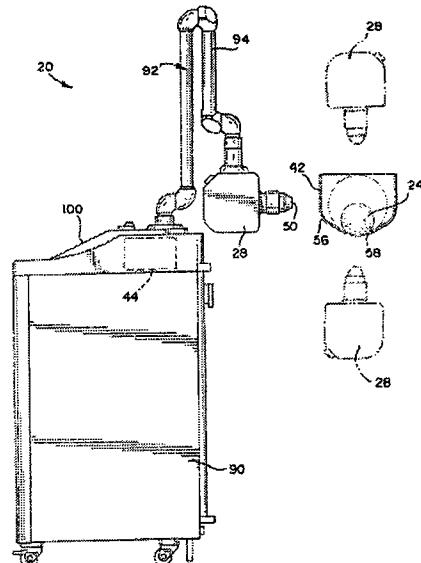
B. REJECTION OF CLAIMS 1-6 UNDER 35 U.S.C. 102(b) OVER U.S. PATENT NO. 5,897,797 ("DROUILLARD ET AL.")

Claim 1 recites, in a system for inscribing a pattern on a surface, an emitter / marking head assembly comprising, *inter alia*, an emitter housing containing a laser source for producing a high intensity beam disposed in the interior of the emitter housing, and a marking head being pivotally joined to a wall of the emitter housing by a pivot joint, the pivot joint including a through running passage for optical communication between the interior of the emitter housing and the interior of the marking head.

FIG. 6 (reproduced below) of Drouillard et al. shows a laser marking device including a main cabinet 90, an articulated arm and conduit assembly 92, and a remote scanning head 50. Col. 10, line 64 – col. 11, line 1. Col. 11, lines 1 – 6 further describes that:

The articulated arm and conduit assembly 92 provides a flexible link for transfer for the laser beam between the main cabinet 90 and the remote scanning head 50. The flexible conduit which is routed along the articulated arm 94 carries the power, control cabling and air line for the remote scanning head 50.

FIG. 6



Further, as shown in FIG. 12 (reproduced below) and described at col. 12, lines 36 – 43, a laser tube 126 produces a laser beam. After the laser tube 126 fires the laser beam, the laser beam is transmitted down the articulated arm 94 [FIG. 6] to the remote scanning head 50.

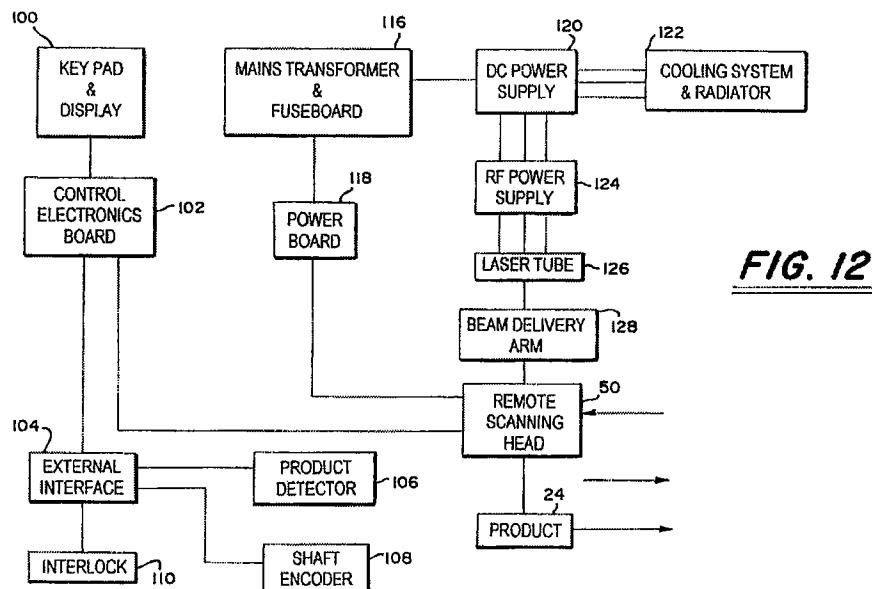


FIG. 12

1. **Drouillard et al. discloses a laser marking device in which the emitter is remote from the marking head.**

In the Appeal Brief, the Applicants argued that Drouillard et al. discloses a laser marking device in which the emitter head is remote from the marking head. In the Examiner's Answer, the Examiner disagreed "because the laser/emitter (28) is attached to the laser/marketing head (50) (see figure 6)."

While Drouillard et al. loosely refers to element 28 as a "laser," it is clear from the passages cited above that the "emitter," "laser source," or "laser tube 126" is located in main cabinet 90, and that the "laser beam" is transmitted down the articulated arm 94 to the remote scanning head 50. There is no disclosure in Drouillard et al. that element 28 is a "laser / emitter." Thus, as Applicants argued, Drouillard et al. discloses only "a laser marking device in which the emitter is remote from the marking head." It is respectfully submitted that the Examiner's

disagreement with the Applicants' argument, in effect, is a mischaracterization of the teaching of Drouillard et al.

2. In Drouillard et al., an articulated arm interconnects the remote emitter to the marking head.

In the Appeal Brief, the Applicants argued that in Drouillard et al. an articulated arm interconnects the remote emitter to the marking head. In the Examiner's Answer, the Examiner disagreed "because the emitter (laser) (28) is attached to the laser head (50), which makes marks on the product. The articulating arm and conduit assembly (92 & 94) carried the power, control cabling and air line for the remote scanning head (50). (col. 11, lines 4 – 6.)"

As discussed above, Drouillard et al. teaches that a flexible conduit which is routed along the articulated arm 94 carries the power, control cabling and air line for the remote scanning head 50. The articulated arm 94 connects the emitter (laser tube 126) to the marking head (remote scanning head 50) and transfers the laser beam between the main cabinet 90 and the remote scanning head 50 (see: FIG. 6; FIG. 12; col. 12, lines 36 – 43; and col. 10, line 64 – col. 11, line 4). It is respectfully submitted that there is no basis for the Examiner's disagreement with the Applicants' statement that "an articulated arm interconnects the remote emitter to the marking head."

3. In Drouillard et al., the marking head and emitter housing are not directly pivotally attached.

In the Appeal Brief, the Applicants argued that the two units are not directly pivotally attached. In the Examiner's Answer, the Examiner disagreed "because the laser head (50) is connected to an articulated arm (94) and conduit (92), which is flexible (known pivotal motion). (See figure 6, col. 10, lines 64 – 67 & col. 11, lines 1-2.)."

It appears that the Examiner is now reading the main cabinet 90 to be the “emitter,” because the “articulated arm (94) and conduit (92)” connects the laser head 50 to the main cabinet 90. It is noted that this reading is inconsistent with above sections in which the Examiner reads the laser 28 as the “emitter,” but is consistent with the Applicants’ arguments in the above sections. Nevertheless, it is respectfully submitted that “the articulated arm and conduit” taught by Drouillard et al. is not a direct pivotal attachment of the emitter (laser tube 126 in the main cabinet 90) and the marking head (remote scanning head 50), because attachment of the emitter to the marking head through an articulated arm is not a direct pivotal attachment of the two units.

Further, claim 1 recites “a marking head being pivotally joined to a wall of the emitter housing by a pivot joint.” It is respectfully submitted that “an articulated arm providing a flexible link between a main cabinet (read as “emitter housing”) and a remote scanning head (read as “a marking head”)” cannot be equated with “a marking head being pivotally joined to a wall of an emitter housing by a pivot joint” because “a link provided by an articulated arm” does not equate to “joining” the units by “a pivot joint.”

4. In Drouillard et al., the articulated arm provides an elongated optical path with the attendant deficiencies associated with articulated arms.

In the Appeal Brief, the Applicants noted that “the articulated arm provides an elongated optical path with the attendant deficiencies associated with articulated arms, especially the need for constant adjustment to maintain the optical path.” The Examiner noted that “the articulated arm and conduit have a fixed length (see figure 6) and hence adjustment is not possible” and that “the laser beam is directed along a predetermined path (claims).”

With respect to “the articulated arm and conduit having a fixed length and hence adjustment is not possible,” it is respectfully submitted that “having a fixed length” is irrelevant

to whether adjustment of the arm is possible. By its very definition, an articulated arm is adjustable.

With respect to the laser beam being “directed along a predetermined path,” it is respectfully submitted that being directed along a predetermined path is irrelevant to the “elongated optical path with the attendant deficiencies associated with articulated arms.”

5. The features upon which the applicant relies are present in the rejected claim.

The Examiner states that the features upon which the applicant relies (i.e., direct attachment of the emitter housing and marking head, and short optical path) are not recited in the rejected claim(s). However, claim 1 recites “said marking head being pivotally joined to a wall of said emitter housing by a pivot joint.” It is respectfully submitted the marking head being “pivotally joined” to the emitter housing by a “pivot joint” is, in effect, recitation of a direct attachment of the emitter housing and the marking head because joining two items at a joint precludes attachment of the items through an intermediate element, such as an articulating arm. Further, it is respectfully submitted that, as opposed to a connection through an articulating arm, the functional result of the recited structure is an inherently shorter optical path relative to the optical path through the articulating arm.

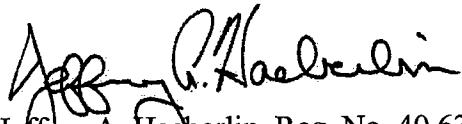
Applicants maintain that the elimination of the articulated arm, affirmatively recited as “joining (i.e. directly attaching) the marking head to the emitter housing,” represents a substantial improvement over prior art devices such as represented by Drouillard et al.

* * * * *

For the reasons provided in the Appeal Brief and as further discussed above, it is respectfully submitted that the amendment to the specification does not introduce new matter, and that Drouillard et al. does not anticipate the invention. It is respectfully requested that the Board order entry of the amendment to the specification and reverse the rejection of the claims.

DATE: November 29, 2007

Respectfully submitted,



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